

RIVERS AND FLOODS, NOVEMBER, 1910.

By Prof. H. C. FRANKENFELD, in charge of River and Flood Division.

November, 1910, was preeminently a month of low water except in the Missouri Valley and the North Pacific States, and in many portions of the country the stages were the lowest of record. The deficiency in water supply was most pronounced in the upper Mississippi and lower Arkansas rivers, the Red River of the North, the upper Red River of the South, and in the rivers of California. More detailed accounts of the low waters will be found in the reports of the various district editors.

There were no floods during the month except a moderate one in the Willamette River and its tributaries during the closing days. The rise was caused by persistent and substantial rains from November 17 to 30, inclusive, but, owing to the moderate stages reached, no damage was done so far as is known. At the end of the month the crest of the rise had not reached Portland, Oreg.

Running ice appeared in the Missouri River at Bismarek, N. Dak., on November 6, and the river closed on November

19. Ice was first observed at Sioux City, Iowa, on November 19, but none was seen very far below that city. The Milk River froze over at Havre, Mont., on November 18, and the James River at Huron, S. Dak., on November 28. The St. Croix River at Stillwater, Minn., and the Wisconsin River at Muscoda, Wis., closed on November 17 and 18, respectively. Floating ice was first observed in the Mississippi River at St. Paul, Minn., on November 28, and on November 30 the main channel was blocked at Robert street. No ice was observed south of Muscatine, Iowa, where it was first observed on the last day of the month.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

Special papers on general meteorology.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

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The following have been selected from among the titles of books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Anonymous publications are represented by a —.

Alberta (province). Department of agriculture.

Annual report. 1909. Edmonton. 1910. 251, iii p. 8°.

American climatological association.

Transactions. 1910. v. 26. Philadelphia. 1910. xxvi, 235 p. 8°.

Fortschritte der Physik.

Fünfundsechzigster Jahrgang. 1909. III. Kosmischer Physik. Braunschweig. 1910. lxx, 584 p. 8°.

Havana. Colegio de Belén. Observatorio.

Observations. 1909. Habana. 1910. v. p. f°.

Moscow. Institut agronomique. Observatoire météorologique.

Observations. 1908. Moskva. 1910. xxxv, 72 p. 4°.

Métin, Albert.

La Colombe Britannique. Paris. 1908. 431 p. 8°. [Chapitre VI. Vents, pluies et saisons. p. 81-96.]

Öfversigt af Finska Vetenskaps-societetens Förhandlingar.

52. 1909-1910. A. Matematik och Naturvetenskaper. Helsingfors. 1910. v. p. 8°.

C. Redogörelser och Förhandlingar. Helsingfors. 1910. v. p. 8°.

Saxony. Königl. sächs. Landes-Wetterwarte.

Dekaden-Monatsberichte. (Vorläufige Mitteilung.) 1909. Jhrg. 12. Dresden. 1910. 106 p. f°.

Deutsches meteorologisches Jahrbuch, 1906. Jhrg. 24. Dresden. 1910. 187 p. f°.

Deutsches meteorologisches Jahrbuch, 1907. Jhrg. 25. I. Beobachtungen an den Stationen II. Ordnung. Dresden. 1910. 80 p. f°.

Tetens, Otto, & Linke, Franz.

Das Klima von Samoa. Berlin. 1910. 114 p. 4°. (Abhdl. k. Gesell. Wiss., Göttingen. Math.-Physik. Kl., Neue Folge. Bd. 7. No. 4.)

Zi-ka-wei. Observatoire magnétique, météorologique et sismologique.

Bulletin des observations. T. 32. Année 1906. Fasc. B.—Météorologie. Chang-Hai. 1909. xxiv, 149 p. f°.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

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The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or

other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —.

American climatological association. Transactions. Philadelphia. v. 26. 1910.

Hinsdale, Guy. The meteorologic and hygienic relations of the floods in France in 1910. p. 32-54.

Phillips, W. F. R. Natural and artificial or house climates. p. 55-61. *Journal of geography. Madison. v. 9. December, 1910.*

Chamberlain, James F. Climate as related to industry and commerce. p. 93-98.

Nature. London. v. 85. December, 1910.

Barnes, H. T. Marine microthermograms and the influence of icebergs on the temperature of the sea. p. 137-138. (Dec. 1.)

Shaw, W. N. The new meteorological office. p. 181-183. (Dec. 8.) *Royal meteorological society. Quarterly journal. London. v. 36. October, 1910.*

Nash, William Carpenter. Daily rainfall at the royal observatory. Greenwich, 1841-1903. p. 309-328.

Bonacina, L. C. W. Low temperature periods during the winters 1908-9 and 1909-10. p. 329-332.

Corless, Richard. The rate of rainfall at Kew in 1908. p. 333-340.

Craig, J. I. England—Abyssinia—the South Atlantic; a meteorological triangle. p. 341-360.

Mossman, R. C. The present position of antarctic meteorology. p. 361-374.

Scientific American. New York. v. 103. Dec. 24, 1910.

—The specter of the Brocken. p. 494.

—The invention of the rain gauge. p. 504.

United States. Weather bureau. Meteorological chart of the North Atlantic ocean. February, 1911.

Pickels, A. C. Waterspouts. [Also published in the N. Pacific chart for February, 1911.]

Annales de chimie et de physique. Paris. Tome 21. Décembre 1910.

Schwoerer, Émile. Les phénomènes thermiques de l'atmosphère. p. 433-457.

Nature. Paris. 39 année. 1910.

Descombes, Paul. Pluies normales, pluies diluviennes et inondations. p. 27-28. (10 Déc.)

Loisel, J. Le spectre du Brocken. p. 33-35. [Includes photograph of Brocken specter seen from Pic du Midi.]

9. Congrès international d'aéronautique. Procès-verbaux. Nancy, 1909.

Teisserenc de Bort, L. La circulation de l'atmosphère, d'après les observations des nuages et les sondages aériens. p. 329-338.

Brunhes, [Bernard]. L'enseignement de la météorologie dans les universités françaises. p. 339-342.